

## Claims

1. Method for packeting time-synchronous data during a transmission in a packet data network,
  - 5 - whereby several time-synchronous links (1..5) exist in the packet data network and
  - whereby data packets of a link (1..5) are sent with the spacing of a period duration (TP) in a recurrent manner, characterized in that
  - 10 - the start of data transmission of a link (1..5) is selected such that the data packets of the different links (1..5) are as evenly distributed as possible in relation to time (t).
- 15 2. Method according to claim 1, characterized in that
  - a time interval corresponding to the period duration (TP) is divided into a number of equally large time slots corresponding to the number of possible links (1..10),
  - a time slot is permanently assigned to each possible link
  - 20 (1..10) and
  - when setting up a new link (N) the start of data transmission is selected such that a new data packet is inserted into the time slot corresponding to this link (N).
- 25 3. Method according to claim 2, characterized in that
  - several different packeting times (TPA1, TPA2, TPA3) are used in a system and
  - the largest common divisor of all packeting times (TPA1,
  - 30 TPA2, TPA3) is selected as the period duration (TP).
4. Method according to claim 1, characterized in that

- when setting up a new link (N) the time spacings between the data packets of the different links (1..5) are evaluated within a time interval corresponding to the period duration (TP) and
  - 5 - the start of data transmission of the new link (N) is selected such that a new data packet is inserted into the largest time gap between the already existing data packets.
- 10 5. Method according to claim 4, characterized in that the gap is divided into two equally sized parts.
6. Method according to claim 4 or 5, characterized in that
- a time interval corresponding to the period duration (TP)
  - 15 is divided into a number of equally sized time slots corresponding to the number of possible links (1..10) and
  - when setting up a new link (N) the start time of data transmission is rounded such that a new data packet is inserted into a time slot.
- 20 7. Method according to one of the claims 4 to 6, characterized in that
- several different packeting times (TPA1, TPA2, TPA3) are used in a system,
  - 25 - the largest common divisor of all packeting times (TPA1, TPA2, TPA3) is selected as the period duration (TP) and
  - when evaluating the time spacings between the data packets of the different links (1..3) within a time interval corresponding to the period duration (TP), account is also
  - 30 taken of those links (2..3) to which no data packet is being transmitted in the time interval under consideration.

8. Device for packeting time-synchronous data in a packet data network, comprising

- means for packeting several time-synchronous links (1..5) and
- 5 - means for periodically recurrent sending of data packets of a link (1..5) with the spacing of a period duration (TP),

characterized in that

- the device additionally comprises means for starting the  
10 data transmission of a link (1..5) such that the data packets of the different links (1..5) are as evenly distributed as possible in relation to time (t).

9. Device according to claim 8, comprising

- 15 - means for dividing a time interval corresponding to the period duration (TP) into a number of equally sized time slots corresponding to the number of possible links (1..10),
- means for the permanent assignment of each possible link  
20 (1..10) to a time slot and
- means for starting data transmission of a new link (N) such that a new data packet is inserted into the time slot corresponding to this link (N).

25 10. Device according to claim 8, comprising

- means for evaluating the time spacings between the data packets of the different links (1..5) within a time interval corresponding to the period duration (TP) and
- means for starting data transmission of a new link (N)  
30 such that a new data packet is inserted into the largest time gap between the already existing data packets.